DETAILED ACTION

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Bradley D. Lytle (Reg. No. 40,073) on 10 November 2008.

This application has been amended as follows:

IN THE CLAIMS

Replace claim 1 and 7 as follows.

Claim 1:

A data communication apparatus having a memory space, the data communication apparatus managing the memory space by separating the memory space into one or more file systems, the apparatus comprising:

controlling means for holding a separating authority key and managing the access to the file system in the memory space, wherein said separating authority key is not known to any of a plurality of service providers that share said memory space; and

a first file system allocated to a first service provider in the memory space, the first file system holding an issuer key of the first service provider, wherein said issuer key is only known to its associated service provider;

wherein, upon receiving, from a second service provider requesting an allocation of a new file system, a separate package generated by encrypting, using the issuer key of the first service provider, a data block containing a separate element package generated by encrypting an issuer key of the second service provider using the separating authority key and information on the new file system, the first file system decrypts the received separate package using the issuer key of the first service provider and retrieves the separate element package and the information on the new file system, and wherein the controlling means decrypts the separate element package using the separating authority key, retrieves the issuer key of the second service provider, separates a free area of the memory space in accordance with the information on the new file system, and allocates the separated memory area to a second file system holding the issuer key of the second service provider.

CLAIM 7:

A method for managing a memory of a data communication apparatus, the data communication apparatus having a memory space and managing the memory space by separating the memory space into one or more file systems, wherein a separating authority key for authenticating authority to separate the file system and a first file system for authenticating access authority using an issuer key of a first service provider are provided in the memory space, the method comprising the steps of:

holding the separating authority key and managing the access to the file system in the memory space, wherein said separating authority key is not known to any of a plurality of service providers that share said memory space;

allocating the first file system to the first service provider in the memory space, the first file system holding an issuer key of the first service provider, wherein said issuer key is only known to its associated service provider;

receiving, from a second service provider requesting an allocation of a new file system, a separate package generated by encrypting, using the issuer key of the first service provider, a data block containing a separate element package generated by encrypting an issuer key of the second service provider using the separating authority key and information on the new file system;

decrypting the received separate package using the issuer key of the first service provider and retrieving the separate element package and the information on the new file system; and

decrypting the separate element package using the separating authority key, retrieving the issuer key of the second service provider, separating a free area of the memory space in accordance with the information on the new file system, and allocating the separated memory area to a second file system holding the issuer key of the second service provider.

Allowable Subject Matter

Claims 1 and 7 are allowed.

The following is an examiner's statement of reasons for allowance:

The above mentioned claims are allowable over prior arts because the CPA (Cited Prior Art) of record fails to teach or render obvious the claimed limitations in combination with the specific added limitations recited in claims 1 and 7 (& associated dependent claims).

The present invention is directed to a method for data communication apparatus having a memory space, the data communication apparatus managing the memory space by separating the memory space into one or more file systems, the apparatus. No singular art disclosing, nor motivation to combine has been found to anticipate or render obvious the claimed invention of controlling means for holding a separating authority key and managing the access to the file system in the memory space, wherein said separating authority key is not known to any of a plurality of service providers that share said memory space; and a first file system allocated to a first service provider in the memory space, the first file system holding an issuer key of the first service provider, wherein said issuer key is only known to its associated service provider; wherein, upon receiving, from a second service provider requesting an allocation of a new file system, a separate package generated by encrypting, using the issuer key of the first service provider, a data block containing a separate element package generated by encrypting an issuer key of the second service provider using the separating authority key and information on the new file system, the first file system decrypts the received separate package using the issuer key of the first service provider and retrieves the separate element package and the information on the new file system, and wherein the controlling means decrypts the separate element package using the separating authority key, retrieves the issuer key of the second service provider, separates a free area of the memory space in accordance with the information on the new file system, and allocates the separated memory area to a second file system holding the issuer key of the second service provider.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Longbit Chai/

Primary Patent Examiner
   Art Unit 2431
   11/25/2008